

REMARKS

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Initially, Applicants note that items 4 and 6 of the Office Action summary page indicate that claim 1 is pending and rejected. However, claim 1 was cancelled in the Amendment filed June 27, 2006.

Claims 2-8 and 11-30 have been cancelled, without prejudice.

New claims 31-34 have been added to the application. The new claims are directed to a process for preparing a sliding part. Support for the new claims is found on page 8, lines 12-19; page 8, line 22 to page 9, line 2; page 11, line 27 to page 12, line 3; page 12, lines 14-16 and 18-20 and page 20, lines 6-10 of Applicants' specification. Thus, no new matter has been added to the application.

Although these amendments are presented after final rejection, the Examiner is respectfully requested to consider and enter the amendments, as they place the application in condition for allowance.

The patentability of the present invention over the disclosures of the references relied upon by the Examiner in rejecting the claims will be apparent upon consideration of the following remarks.

Thus, the rejection of claims 21-30 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Tanaka et al. has been obviated by the cancellation of these claims.

The following comments are presented with regards to the patentability of new claims 31-34 over Tanaka et al.

New independent claim 31 recites coating a surface of a base material by electroplating the surface of the base material with an under layer selected from the group consisting of (a), (b), (c), (d) and (e), and subsequently coating a surface of the under layer by electroplating the surface of the under layer with an upper layer selected from the group consisting of (f), (g), (h) and (i).

The Examiner takes the position that Tanaka et al. teach a bearing comprising an electrodeposited upper layer of tin film and an electrodeposited copper alloy under layer. The Examiner further states that Tanaka et al. teach that the electroplated under layer is subjected to diffusion to form a copper-tin intermetallic. Therefore, the Examiner asserts

that the electrodeposited film of Tanaka et al. meets the claim limitations wherein an upper layer is an alloy of tin and copper is formed on an under layer comprising an alloy of copper and tin since the diffusion would cause copper to diffuse into the upper layer forming an alloy of the claimed material.

However, Applicants' claims recite a process for preparing a sliding part. Tanaka et al. fail to teach or suggest coating a surface of the under layer by electroplating the surface of the under layer with an upper layer comprising one of Applicants' recited materials. On the contrary, Tanaka et al. teach a multilayered end bearing consisting essentially of a backing plate of steel, a copper alloy layer comprising Cu, Sn and P bonded to the upper surface of the backing plate, a Cu-Sn intermetallic compound layer bonded to said copper alloy layer, and a tin layer bonded to said Cu-Sn intermetallic compound layer. (See claim 1 of Tanaka et al.) As discussed by the Examiner, Tanaka et al. teach that the Cu-Sn intermetallic compound layer is obtained by allowing tin contained in the tin plated layer to diffuse into the copper alloy layer. (See column 1, lines 50-55 of Tanaka et al.) The diffusion method, as disclosed by Tanaka et al., is not related to Applicants' claimed method.

Therefore, the subject matter of new claims 31-34 is clearly patentable over Tanaka et al.

The rejection of claims 2, 7, 8, 11 and 12 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over JP 11-257355 (JP '355) has been obviated by the cancellation of these claims.

However, the following comments are presented with regards to the patentability of new claims 31-34 over JP '355.

The Examiner takes the position that JP '355 teaches a sliding member comprising an electrodeposited upper layer of tin or indium film and an electrodeposited copper-tin alloy under layer. The Examiner further states that JP '355 teaches that the sliding member may have a zinc under layer. Thus, the Examiner asserts that JP '355 anticipates the claims wherein the film has an under layer of zinc with an upper layer of tin.

However, the Examiner has misunderstood what the abstract (solution) of JP '355 discloses. JP '355 teaches lining of a copper-tin alloy layer carried out on a steel back

plate, but the reference neither teaches nor suggests an electrodeposited copper-tin alloy under layer.

Furthermore, Applicants' new claim 31 excludes zinc as an under layer.

Thus, JP '355 fails to teach or suggest coating a surface of a base material by electroplating the surface of the base material with an under layer as recited in Applicants' claims.

Therefore, the subject matter of claims 31-34 is clearly patentable over JP '355.

The rejection of claims 2, 3, 6, 8, 11-14, 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Tanaka et al. in view of Sakai et al. has been obviated by the cancellation of these claims.

However, the following comments are presented with regards to the patentability of new claims 31-34 over the cited combination of references.

The Examiner admits that Tanaka et al. fail to teach that the under layer is an alloy that includes copper and zinc. The Examiner states that Sakai et al. teach a copper alloy for use as a sliding bearing material which exhibits resistance to fatigue, and that the copper alloy may contain additives such as tin. The Examiner further states that Sakai et al. teach the addition of other elements such as zinc to further strengthen the matrix and enhance resistance to fatigue. The Examiner asserts that it would have been obvious to one of ordinary skill in the art to add zinc to the copper and tin alloy of Tanaka et al. with a reasonable expectation of success.

However, as stated above, Tanaka et al. fail to teach or suggest coating a surface of the under layer by electroplating the surface of the under layer with an upper layer comprising one of Applicants' recited materials. The diffusion method, as disclosed by Tanaka et al., is not related to Applicants' claimed invention, and thus fails to teach or suggest Applicants' claim method.

The teachings of Sakai et al. fail to remedy the deficiencies of Tanaka et al. Therefore, the subject matter of claims 31-34 is clearly patentable over Tanaka et al. in view of Sakai et al.

The rejection of claims 2, 4, 6-8, 11, 12, 15, 16, 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over JP '355 in view of Sakai et al. has been obviated by the cancellation of these claims.

However, the following comments are presented with regards to the patentability of new claims 31-34 over the cited combination of references.

The Examiner admits that JP '355 fails to teach that the under layer is an alloy which contains copper and zinc. The Examiner relies upon Sakai et al. for the reasons stated above. Thus, the Examiner asserts that it would have been obvious to one of ordinary skill in the art to add zinc to the copper and tin alloy of JP '355 with a reasonable expectation of success.

However, as stated above, JP '355 fail to teach or suggest Applicants' claimed method. The teachings of Sakai et al. fail to remedy the deficiencies of JP '355. Therefore, the subject matter of claims 31-34 is clearly patentable over JP '355 in view of Sakai et al.

Therefore, in view of the foregoing amendments and remarks, it is submitted that each of the grounds of rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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